BC Environment

Cougar in British Columbia

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The cougar, the largest wild cat native to British Columbia, is an imposing but evasive member of our wildlife. His secretive habits, and sometimes astounding predatory abilities (the cougar is capable of killing a 600 pound moose or elk), have resulted in a wealth of human misconceptions and irrational fears. In some instances, "control" programmes responding to these fears placed severe and unwarranted hunting pressure upon cougar populations.

Appearance and Distribution

The adult cougar is a large animal: the heaviest recorded was an Arizona cougar which weighed 276 pounds. Although there have been several cougar taken in British Columbia weighing between 190 and 210 pounds, the average adult male weighs about 125 pounds and the female 100 pounds. Large adult males may measure 9 feet in length, including a 30-inch tail.

The fur is short and, in British Columbia, ranges in colour from reddish-brown to a grey-brown, with light underparts. Very young kittens are spotted, with ringed tails; this coloration is gradually lost as young cougar reach adulthood. Adults are unmarked.

Black cougar have been reported from South America and one was reported several years ago in the North Okanagan area, while white or very light-coloured cougar are infrequently reported.

The cougar is found only in the Western Hemisphere, from northern British Columbia to Patagonia in southern Argentina. In Canada, the cougar has been recorded from British Columbia east to New Brunswick. Distribution in British Columbia extends north from the United States - British Columbia border to Big Muddy River on the Alaska Highway South of about 54 degrees latitude cougar are generally found from the British Columbia-Alberta border west, to and including, most coastal islands. Cougar have not reached the Queen Charlotte Islands.

In response to human contact with the cougar over such an extensive geographical area, many local names have developed for this impressive animal: cougar, puma, mountain lion, deer tiger, Indian devil, and Mexican lion are a few of their descriptive titles.

Territory

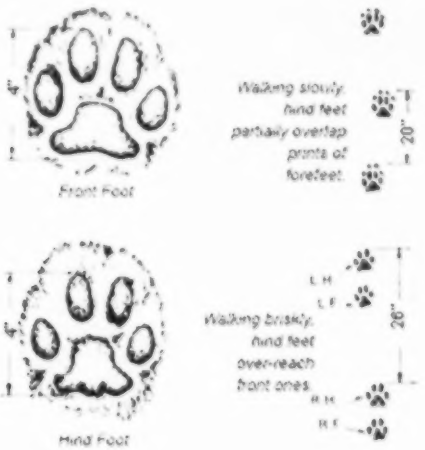
The territory or home range of individual cougar has been recognized for many years, but only recently have accurate limits been assigned to these ranges. Early estimates suggested that cougar maintained home ranges of up to, or greater than, 100 square miles. In Idaho, where the winter territory of cougar was examined, females on the study area maintained territories of 5 to 20 square miles. Females with kittens required larger ranges than females without kittens, and some overlap of female ranges was noticed. Males occupied larger territories - one male occupied a range of 25 square miles. Resident males did not overlap ranges. Transient cougars moved through occupied ranges, but avoided residents.

An occupied range is clearly marked by the resident cougar. This is done by a series of visual and olfactory signals which are easily recognized by other cats. Scratch piles are made at regular locations on which the cougar may urinate or defecate. All cougar make these marks, but males mark more frequently than females, and the marks are more numerous during periods of high populations.

One old male who had taken up residence on a small coastal island (about 4 square miles) was found to have made no scratch piles (at least none was found). With no other cougar on his island there was no need to mark his territory.

Food Habits

The predatory activities of the cougar are legendary, and prey species in British Columbia range from large animals to mice, and include deer, porcupine, beaver, varying hare, moose, elk, wild sheep, mountain goats, black bear (cubs), grouse, coyote, other cougar, domestic stock, and household pets.



The cougar is, in part, an **opportunist** when looking for food. A study of the winter food habits of cougar in south-central British Columbia concluded that **mule deer** was the staple winter food, but a variety of other species were taken. When a population of varying hare was at a peak the hare were preyed upon frequently, domestic stock, when available, were eaten, as were moose. Adult mule deer bucks (1 1/2 years and older) were selected over anterless mule deer, and, in general, very old animals were taken by cougar in a greater proportion than were represented in the mule deer population.

There are few authentic instances of cougar attacking humans. Normal behaviour is one of human avoidance, although cougar often displays a harmless curiosity toward the actions of man. They

have been observed sitting at a vantage point and watching, sometimes for hours, people either working or playing out of doors. Hunters, and others, have reported the tracks of a cougar following their own in the snow. The infrequent attacks on humans are usually attributed to old, starving cougar, or to cougar which are defending their young.

When hunting the larger ungulates, cougar do not crouch over or near a game trail waiting for the unsuspecting prey to pass nearby. The kill is usually made following a careful stalk of the intended victim. Cougar hunters have observed that cats must make a kill within two or three jumps, usually 20 to 50 feet after their stalk. If the prey escapes, the cougar will rarely follow, and the stalk will be repeated upon a different animal. The kill follows a sudden leap from the ground onto the shoulders and neck of the prey. The most effective kills are made when the cougar holds the head with a forepaw and bites down through the back of the neck, near the base of the skull.

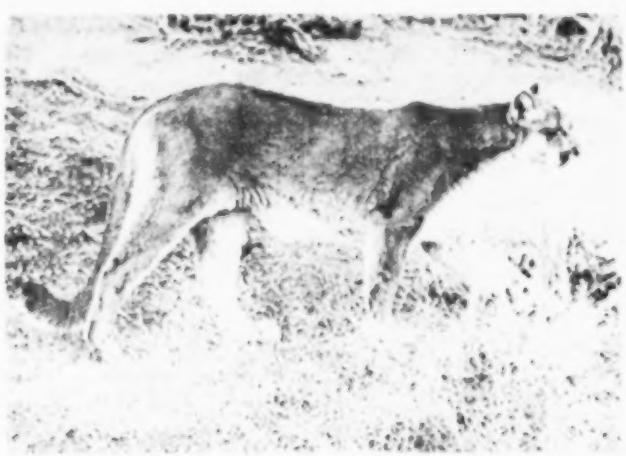
Kills are not always quick or successful and the larger prey, particularly large elk, moose, or deer, will struggle violently to escape. Instances where cougar have been seriously hurt following such encounters are infrequent, but not unheard-of.

Porcupine, despite their troublesome quills, are not an insurmountable obstacle to a cougar. Cougar tend to avoid the quills by flipping the porcupine on its back and eating the underparts first. It is not necessary however, to eat the flesh only, as cougar stomachs containing quills in varying stages of digestion have been encountered. There appears to be little ill-effect from these quills, although single quill may puncture the stomach wall and work into the abdominal cavity. Cougar are frequently found with quills in their paws and around the face, but these apparently are either pulled out, fall out, or, if they work under the skin, eventually dissolve.

Wasteful behaviour in the killing of prey is the exception and not the rule. Cougar generally eat about 70 per cent (by weight) of the carcass of a big-game animal, leaving most of the larger skeletal bones, the rumen, some viscera, and parts of the hide. They will make repeated visits to a carcass, take a meal during each visit, and usually cover the remains with dirt and debris after each feed.

Although there have been observations where a single cougar has killed several deer, domestic sheep, etc., at one time, detailed studies have shown an adult cougar needs no more than 14 to 20 average-sized mule deer per year. This will be less if the diet is supplemented by other foods.

Habitat Preference



Cougar distribution in British Columbia is governed by the distribution of its major prey species, deer. Summer observations are scanty, but as the snow recedes cougar probably spread out from the lower slopes and valley bottoms to inhabit virtually all elevations within their general distributional boundaries. During winter months, cougar follow the deer down to the lower elevations. They seem to prefer the rough, rocky, semi-open areas surrounding the major deer winter ranges (in the Interior), but they do not confine their activities exclusively to this type of habitat, and cougar signs can be found anywhere within a game winter range.

Breeding Habits

Cougar are polygamous (one male will breed several females) and only the female tends the young.

Females reach sexual maturity at 2 to 3 years of age. Breeding takes place at any time of the year, and one to six kittens are born after a gestation period of about 96 days. The single observation of six kittens (from Utah) is an unusual record and observations in British Columbia indicate one to four kittens are carried by the female.

The female gives birth to her young in a rocky crevice or den, protected by roots or windfalls, Kittens are born with their eyes closed, but these open 10 to 14 days after birth. The kittens nurse for at least five to six weeks. Captive kittens will take meat at about six weeks of age.

Voice

Cougar produce a wide variety of sounds, the most striking of which is a piercing, drawn-out scream. Observations on captive cats indicate that **only the females scream**, and such behaviour is particularly prevalent during the mating period. Those who have been fortunate enough to hear this scream in the wild describe it variously as nerve-wracking, demoniac, terror-striking, a trilling wail, and thrillingly impressive. Unfortunately, this distinctive cry is heard by very few outdoorsmen.

Cougar also produce a distinctive chuckle as well as many of the house cat sounds; mews, hisses, spits, and growls, while males and kittens frequently emit a whistle-like sound. This whistle is used by the kittens to attract the mother.

Population Control

Little is known of the general mortality factors, apart from human hunting, which control cougar populations. Because of the cougar's strength and agility, they rarely come out second-best encountering other forms of wildlife, although conflicts with grizzly bears are probably avoided.

Cougar occasionally kill each other. Instances are known of adult males killing other males during conflicts either for territory, food, or the favours of a female. There also have been authentic observations of males killing and eating kittens and young cougar. Some of this cannibalism may be associated with the cougar's need to maintain a territory, and it has been suggested that the number of available territories may be one mechanism which controls cougar numbers.

Starvation may also be an important mortality factor. Observations of thin and weakened cougar increase during years when the cougar population is at a high and prey populations are decreasing or low, particularly during periods of extreme cold and deep snow. Hunting is difficult at such times, kills are made infrequently, and cougar have been found near human habitation, barn yards, and chicken runs. Kittens born during such winters suffer increased mortalities and some adult cougar probably succumb to starvation.

The only measurable population loss is that produced by the human hunter. The rapid increase in popularity of snow machines has been a boon to the cougar hunter but has placed a growing pressure on cougar populations.

Cougar Management

Management entails the protection and maintenance of existing cougar populations, with due consideration for human safety and the legitimate protection of domestic stock. **The importance of the cougar as an integral part of the wildlife of British Columbia cannot be overemphasized**, and careful management must be maintained. The cougar's importance is two fold:
(a) As a legitimate form of outdoor recreation for the hunter and non-hunter alike; and
(b) As a regulator of its major prey populations.

Cougars do not limit big-game populations in British Columbia; i.e., cougar predation on deer, wild sheep, moose, elk, or goat does not set an upper limit on the population size of the prey. However, predation has several beneficial effects upon the prey populations.

(a) Predation by cougar tends to force a constant redistribution of wintering game herds on winter ranges. The presence of a cougar on the winter range does not frighten game, but when a kill is made the deer, or other game animals, usually move a short distance away from the place of kill. This prevents the concentration of animals on a localized food supply.

(b) Cougar provide a culling effect, particularly in deer herds. We now recognize the tendency for cougar to kill older deer and very young deer. These are generally the age groups where food shortages, starvation, and disease take a toll, and predation by cougar tends to remove some of these animals. However, it must be stressed that cougar do not invariably select the weak and the sick. Many deer in prime condition are taken annually by cat predation,

(c) The final benefit is that of prey-population regulation. Animal populations have the ability to rapidly increase and exceed the land's capacity to support them. Predation is one factor which has, through the long history of evolution, acted to control natural populations. The relationship between the cougar and its major prey species is no exception. Without the slow but constant removal of animals from a population the prey populations will increase until some other factor, probably either disease, climate or food exerts an upper limit. Control by any of these three may be drastic and sudden, and animal populations so affected often drop to very low levels before a period of recovery sets in.

The human hunter has, in part, reduced the necessity for the predatory activity of large cougar populations to help regulate most of British Columbia's big-game populations. However, to maintain the several natural predator species, including the cougar, restricted hunting seasons and bag limits have been designed to allow room for man and the wild predators. Regulated game seasons and a lowered cougar population should work together to control populations of big-game animals throughout British Columbia.

CREDITS

This folder was prepared by the British Columbia Fish and Wildlife Branch, Information and Education Section.

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